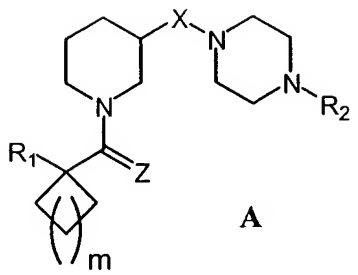
We claim:

1. A compound represented by **A**:



A

wherein

X represents $(C(R)_2)_n$;

Z represents O or H_2;

R represents independently for each occurrence H, alkyl, cycloalkyl, aryl, heteroaryl, aralkyl, or heteroaralkyl; or any two geminal instances of R taken together represent O;

R_1 represents optionally substituted aryl or heteroaryl; wherein any optional substituent is selected from the group consisting of alkyl, cycloalkyl, fluoro, chloro, bromo, iodo, hydroxy, alkoxy, acyloxy, acyl, nitro, nitroso, amino, acylamino, sulfonyl, and sulfonylamino;

R_2 represents optionally substituted aryl, heteroaryl, arylalkyl, heteroarylalkyl, di(aryl)alkyl, or di(heteroaryl)alkyl; wherein any optional substituent is selected from the group consisting of alkyl, cycloalkyl, fluoro, chloro, bromo, iodo, hydroxy, alkoxy, acyloxy, acyl, nitro, nitroso, amino, acylamino, sulfonyl, and sulfonylamino;

m is 0, 1, 2, or 3;

n is 1, 2, or 3; and

the stereochemical configuration at any stereocenter of a compound represented by A is *R*, *S*, or a mixture of these configurations.

2. The compound of claim 1, wherein R represents independently for each occurrence H.

3. The compound of claim 1, wherein R_1 represents optionally substituted phenyl.

4. The compound of claim 1, wherein R_1 represents 4-chlorophenyl.

5. The compound of claim 1, wherein R_2 represents optionally substituted phenyl or diphenylmethyl.

6. The compound of claim 1, wherein R_2 represents 2-methoxyphenyl, 2-trifluoromethoxyphenyl, 2-isopropoxyphenyl, 2-fluorophenyl, 4-fluorophenyl, 2-chlorophenyl, 3-chlorophenyl, or di(4-fluorophenyl)methyl.

7. The compound of claim 1, wherein m is 0, 1, or 2.

8. The compound of claim 1, wherein n is 1.

9. The compound of claim 1, wherein R represents independently for each occurrence H; and R_1 represents optionally substituted phenyl.

10. The compound of claim 1, wherein R represents independently for each occurrence H; and R_1 represents 4-chlorophenyl.

11. The compound of claim 1, wherein R represents independently for each occurrence H; and R_2 represents optionally substituted phenyl or diphenylmethyl.

12. The compound of claim 1, wherein R represents independently for each occurrence H; and R_2 represents 2-methoxyphenyl, 2-trifluoromethoxyphenyl, 2-isopropoxyphenyl, 2-fluorophenyl, 4-fluorophenyl, 2-chlorophenyl, 3-chlorophenyl, or di(4-fluorophenyl)methyl.

13. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents optionally substituted phenyl; and R_2 represents optionally substituted phenyl or diphenylmethyl.

14. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents 4-chlorophenyl; and R_2 represents 2-methoxyphenyl, 2-trifluoromethoxyphenyl, 2-isopropoxyphenyl, 2-fluorophenyl, 4-fluorophenyl, 2-chlorophenyl, 3-chlorophenyl, or di(4-fluorophenyl)methyl.

15. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents optionally substituted phenyl; R_2 represents optionally substituted phenyl or diphenylmethyl; and m is 0, 1, or 2.

16. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents 4-chlorophenyl; R_2 represents 2-methoxyphenyl, 2-trifluoromethoxyphenyl, 2-isopropoxyphenyl, 2-fluorophenyl, 4-fluorophenyl, 2-chlorophenyl, 3-chlorophenyl, or di(4-fluorophenyl)methyl; and m is 0, 1, or 2.

17. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents optionally substituted phenyl; R_2 represents optionally substituted phenyl or diphenylmethyl; m is 0, 1, or 2; and n is 1.

18. The compound of claim 1, wherein R represents independently for each occurrence H; R_1 represents 4-chlorophenyl; R_2 represents 2-methoxyphenyl, 2-trifluoromethoxyphenyl, 2-isopropoxyphenyl, 2-fluorophenyl, 4-fluorophenyl, 2-chlorophenyl, 3-chlorophenyl, or di(4-fluorophenyl)methyl; m is 0, 1, or 2; and n is 1.

19. The compound of claim 1, wherein said compound has an IC_{50} less than 1 μM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

20. The compound of claim 1, wherein said compound has an IC_{50} less than 100 nM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

21. The compound of claim 1, wherein said compound has an IC_{50} less than 10 nM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

22. The compound of claim 1, wherein said compound has an EC_{50} less than 1 μM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

23. The compound of claim 1, wherein said compound has an EC_{50} less than 100 nM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

24. The compound of claim 1, wherein said compound has an EC_{50} less than 10 nM in an assay based on a mammalian dopamine, serotonin, or norepinephrine receptor or transporter.

25. The compound of claim 1, wherein said compound has an IC_{50} less than 1 μM in an assay based on a mammalian dopamine receptor or transporter.

26. The compound of claim 1, wherein said compound has an IC_{50} less than 100 nM in an assay based on a mammalian dopamine receptor or transporter.

27. The compound of claim 1, wherein said compound has an IC_{50} less than 10 nM in an assay based on a mammalian dopamine receptor or transporter.

28. The compound of claim 1, wherein said compound has an EC_{50} less than 1 μM in an assay based on a mammalian dopamine receptor or transporter.

29. The compound of claim 1, wherein said compound has an EC_{50} less than 100 nM in an assay based on a mammalian dopamine receptor or transporter.

30. The compound of claim 1, wherein said compound has an EC_{50} less than 10 nM in an assay based on a mammalian dopamine receptor or transporter.

31. The compound of claim 1, wherein said compound has an IC_{50} less than 1 μM in an assay based on a mammalian serotonin receptor or transporter.

32. The compound of claim 1, wherein said compound has an IC_{50} less than 100 nM in an assay based on a mammalian serotonin receptor or transporter.

33. The compound of claim 1, wherein said compound has an IC_{50} less than 10 nM in an assay based on a mammalian serotonin receptor or transporter.

34. The compound of claim 1, wherein said compound has an EC_{50} less than 1 μM in an assay based on a mammalian serotonin receptor or transporter.

35. The compound of claim 1, wherein said compound has an EC_{50} less than 100 nM in an assay based on a mammalian serotonin receptor or transporter.

36. The compound of claim 1, wherein said compound has an EC_{50} less than 10 nM in an assay based on a mammalian serotonin receptor or transporter.

37. The compound of claim 1, wherein said compound is a single stereoisomer.

38. A formulation, comprising a compound of claim 1; and a pharmaceutically acceptable excipient.

39. A method of modulating the activity of a dopamine, serotonin, or norepinephrine receptor or transporter in a mammal, comprising the step of:

administering to a mammal a therapeutically effective amount of a compound of claim 1.

40. The method of claim 39, wherein said mammal is a primate, equine, canine or feline.

41. The method of claim 39, wherein said mammal is a human.

42. The method of claim 39, wherein said compound is administered orally.

43. The method of claim 39, wherein said compound is administered intravenously.

44. The method of claim 39, wherein said compound is administered sublingually.

45. The method of claim 39, wherein said compound is administered ocularly.

46. The method of claim 39, wherein said compound is administered transdermally.

47. The method of claim 39, wherein said compound is administered rectally.

48. The method of claim 39, wherein said compound is administered vaginally.

49. The method of claim 39, wherein said compound is administered topically.

50. The method of claim 39, wherein said compound is administered intramuscularly.

51. The method of claim 39, wherein said compound is administered subcutaneously.

52. The method of claim 39, wherein said compound is administered buccally.

53. The method of claim 39, wherein said compound is administered nasally.

54. A method of modulating the activity of a serotonin receptor or transporter in a mammal, comprising the step of:

administering to a mammal a therapeutically effective amount of a compound of claim 1.

55. The method of claim 54, wherein said mammal is a primate, equine, canine or feline.

56. The method of claim 54, wherein said mammal is a human.

57. The method of claim 54, wherein said compound is administered orally.

58. The method of claim 54, wherein said compound is administered intravenously.

59. The method of claim 54, wherein said compound is administered sublingually.

60. The method of claim 54, wherein said compound is administered ocularly.

61. The method of claim 54, wherein said compound is administered transdermally.

62. The method of claim 54, wherein said compound is administered rectally.

63. The method of claim 54, wherein said compound is administered vaginally.

64. The method of claim 54, wherein said compound is administered topically.

65. The method of claim 54, wherein said compound is administered intramuscularly.

66. The method of claim 54, wherein said compound is administered subcutaneously.

67. The method of claim 54, wherein said compound is administered buccally.

68. The method of claim 54, wherein said compound is administered nasally.

69. A method of treating a mammal suffering from addiction, anxiety, depression, sexual dysfunction, hypertension, migraine, Alzheimer's disease, obesity, emesis, psychosis, analgesia, schizophrenia, Parkinson's disease, restless leg syndrome, sleeping disorders, attention deficit hyperactivity disorder, irritable bowel syndrome, premature ejaculation, menstrual dysphoria syndrome, urinary incontinence, inflammatory pain, neuropathic pain, Lesche-Nyhane disease, Wilson's disease, or Tourette's syndrome, comprising the step of:

administering to a mammal a therapeutically effective amount of a compound of claim 1.

70. The method of claim 69, wherein said mammal is a primate, equine, canine or feline.

71. The method of claim 69, wherein said mammal is a human.

72. The method of claim 69, wherein said compound is administered orally.

73. The method of claim 69, wherein said compound is administered intravenously.

74. The method of claim 69, wherein said compound is administered sublingually.

75. The method of claim 69, wherein said compound is administered ocularly.

76. The method of claim 69, wherein said compound is administered transdermally.

77. The method of claim 69, wherein said compound is administered rectally.

78. The method of claim 69, wherein said compound is administered vaginally.

79. The method of claim 69, wherein said compound is administered topically.

80. The method of claim 69, wherein said compound is administered intramuscularly.

81. The method of claim 69, wherein said compound is administered subcutaneously.

82. The method of claim 69, wherein said compound is administered buccally.

83. The method of claim 69, wherein said compound is administered nasally.